

68  
3. (AMENDED) Communication system according to claim 1, characterized in that the length of variable length auxiliary signal can also assume the value of zero if a data field of the variable length auxiliary signal comprises a predefined length.

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12. (AMENDED) Multiplex signal according to claim 11, characterized in that the length of the variable length auxiliary signal can also assume the value of zero if a data field of the variable length auxiliary signal comprises a predefined length.

### **REMARKS**

Reconsideration of all grounds of objection and rejection, and allowance of the pending claims are respectfully requested in light of the above amendments and the following remarks. Applicant has carefully reviewed the Office Action and responds as follows:

#### **Oath/Declaration rejection:**

In the Office Action, the oath/declaration was objected to because the inventor's signature is missing. Applicant is preparing a new oath/declaration, thus respectfully request that the objection be held in abeyance. A new oath/declaration will be submitted shortly.

#### **Drawing Objections:**

Applicant has corrected specification to include the reference, as required by the Office Action, in FIGs. 3 and 4. Applicant has also included a new FIG. 4, deleting the reference sign 8, as required by the Office Action.

**Claim rejection of claims 3 and 12 under 35 U.S.C. §112, second paragraph:**

Applicant has amended claims 3 and 12 to recite “length of variable length auxiliary signal can also assume the value of zero if a data field of the variable length auxiliary signal comprises a predefined length.” Support for this amendment can be found, at least, in page 5, lines 19-27.

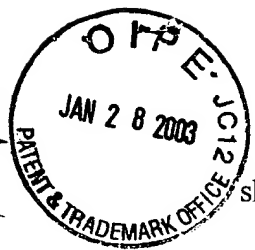
Accordingly, Applicant respectfully requests to withdraw this ground of rejection as the amended claims 3 and 12 now fully comply with the 35 U.S.C §112.

**Claims 1, 2, 3, 8, 9, 10, 11 and 12 rejected under 35 U.S.C. §102(e) over Tezuka (U.S. Patent No. 6,331,989):**

Applicants respectfully traverse this ground of rejection as instant claim 1 recites, *inter alia*, “...the multiplexer is arranged for introducing a variable length auxiliary signal into the multiplex signal, the length of the variable length auxiliary signal being dependent on an aggregate rate of the source signals to be transmitted.” Similar features are also recited in independent claims 8, 9, 10 and 11.

Applicants respectfully submit that the specification at page 5, lines 16-22, describes the frame structure, wherein a continuous stream of packets containing a flag field is multiplexed, and that the length of flag field is variable and can be made dependent on total required bandwidth on the transmission link.

In contrast, the Tezuka discloses that multiplexing circuit 1 is configured to multiplex four different types of signals by time-divisionally multiplexing the signals in the order of A, B, C and D, as shown in FIG. 1 (column 3, lines 25-30). Tezuka fails to teach,



show, or suggest that the multiplexer is arranged for introducing a length field indicating the length of a source signal which depends on the aggregate rate of the source signals.

Accordingly, it is respectfully submitted that claim 1 is not anticipated by Tezuka.

The other claims in this application are each dependent from the independent claim discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual consideration of the patentability of each on its own merits is respectfully requested.

For all the foregoing reasons, it is respectfully submitted that all the present claims are patentable in view of the cited references. A Notice of Allowance is respectfully requested.

Respectfully submitted,

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(Name of Registered Rep.)

[Signature] 1/22/03  
(Signature and Date)



## APPENDIX A

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### IN THE SPECIFICATION:

**Please replace paragraph 2, starting at line 17, in page 3 as follows:**

The communication system according to Fig. 1 comprises a plurality of PBX's 2, 4, 6, 8, 10 and 12. The respective PBX's 2, 4, 6, 8, 10 and 12 comprise a compression server 3, 5, 7, 9, 11 and 13. The PBX's are interconnected via 64kbit/sec channels 14, 16, 18, 20, 22 and 24. The compression servers can compress speech signals to be transmitted according to several compression algorithms, such as G.728, G.729. They also comprise compression algorithms dedicated for fax signals according to several standards such as V.17, V.29 and V.21 and modem signals according to several standards such as V.34, V.32 and V.22.

**Please replace paragraph 2, starting at line 24, in page 3 as follows:**

Each of the channels is able to carry a plurality of compressed voice and data signals. The setup according to Fig. 1 is extensively used to reduce the costs of the channels 14, 16, 18, 20, 22 and 24 which are generally routed via a public telephone network. Without using compressions, the required capacity of the channels between the PBX's should have been substantially larger than presently in the case.

**Please replace paragraph 5, starting at line 16, in page 5 as follows:**

The frame structure according to Fig. 2-3 comprises a continuous stream of packets, some of them being assigned to a connection. The packet starts with a flag field 50, 58, which carries a synchronization sequence. The synchronization sequence can be used for determining the beginning of a new packet. According to an aspect of the present invention, the length of the flag field 50, 58 is variable and can even be zero. This length can be made dependent on total required bandwidth on the transmission link. The length of the flag field is determined by use of a table of which Table 2 is an example.

**Please replace last paragraph 6 in page 5 as follows:**

The flag field 50, 58 is followed by a length field 52, 60 indicating the number of bits carried by the data field 56, 64 in the packet. If the first bit of the length field 52, 60 is equal to "0", the data field 56, 64 has a predefined length. In said case, the length field 52, 60 only consists of one bit with value "0". If the first bit of the length field is equal to "1", the length of the data field 56, 64 is described by the n next bits in the length field 52, 60.

**Please replace first paragraph in page 6 as follows:**

After the length field 52, 60, the connection ID field 54, 62 is transmitted. The connection ID field 54, 62 identifies the connection to which the data in the data field 56, 64 belongs. One connection ID is reserved for peer to peer communication between the controllers 30 and 38 in order to be able to exchange control information between them. Finally the data field 56, 64 is transmitted which carries the compressed source signals. The length field 52, 60 indicates the length of the data field 56, 64.

**Please replace last paragraph starting in page 7 and ending in page 8 as follows:**

In instruction 75 it is checked whether after the reshuffling operation there is sufficient bandwidth available for adding the new channel. If this is not the case, in instruction 77 the new connection is rejected, and the switching core of the ~~PABX~~ PBX should use an alternative connection, such as a dial up connection over the public telephone network. If sufficient bandwidth is available for the new connection to be added, in instruction the length of the flag field in dependence on the aggregate bitrate calculated in instruction 74 76. If the aggregate bitrate is below a threshold value, the flag field has a nominal value. If the aggregate bitrate is above said value, the length of the flag field is decreased. It is possible that the length of the flag field is reduced to zero, effectively making it non-existent.



**Please add the following paragraph between line 16 and 17 in page 8 as follows:**

Finally the program is terminated in instruction 81.

**IN THE CLAIMS:**

**Please amend the claims as follows:**

3. (AMENDED) Communication system according to claim 1, characterized in that the length of variable length auxiliary signal can also assume the value of zero if a data field of the variable length auxiliary signal comprises a predefined length.

12. (AMENDED) Multiplex signal according to claim 11, characterized in that the length of the variable length auxiliary signal can also assume the value of zero if a data field of the variable length auxiliary signal comprises a predefined length.

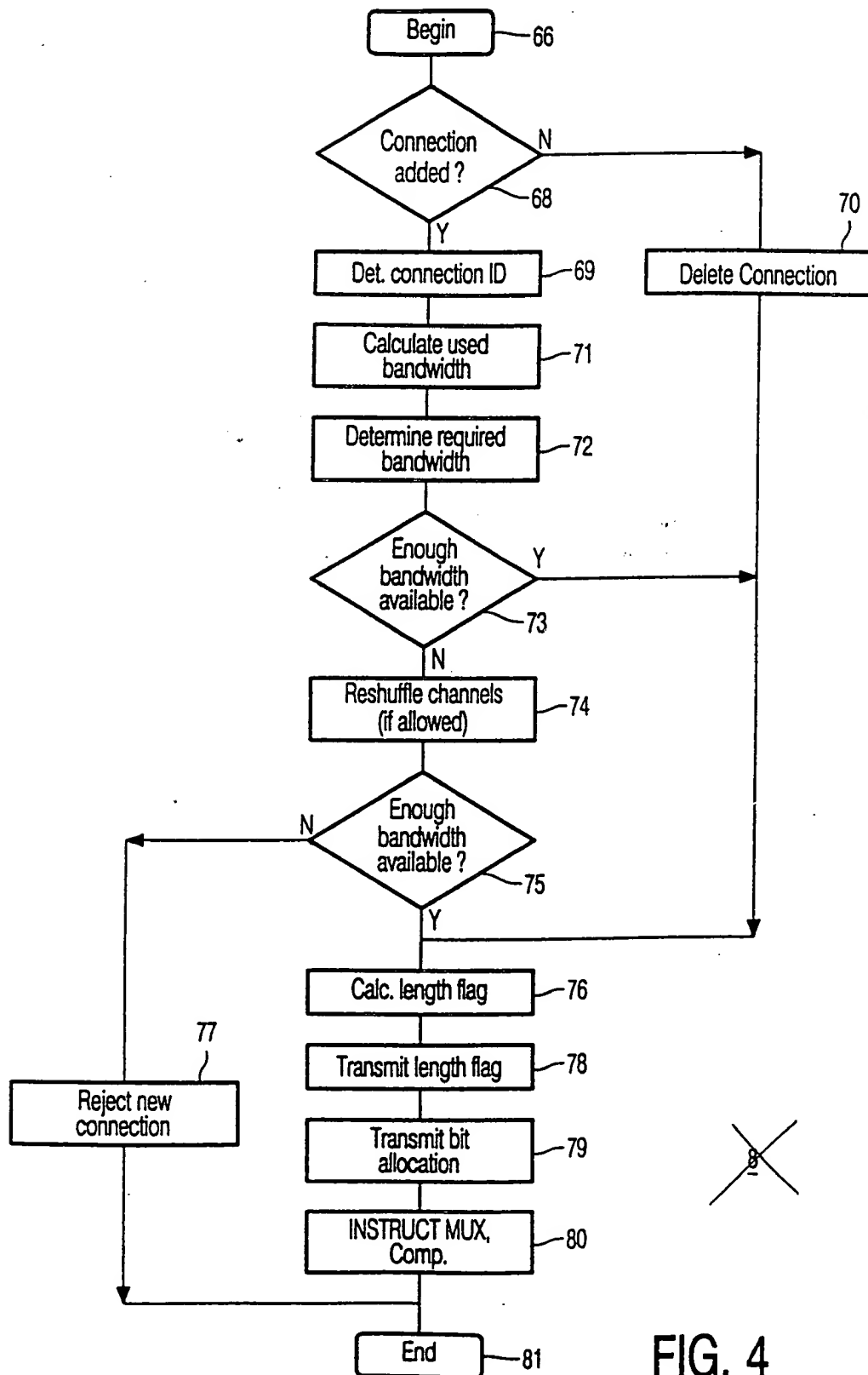


FIG. 4